



WELCOME TO THE DETAILS MAKE THE DIFFERENCE

By Duane Richardson



THE DETAILS MAKE THE DIFFERENCE

“Oh...you play with Toy Trains”

Don’t you just hate it when people say that?

“No, I’m a model railroader...there’s a difference”.

What’s the difference? Details. The details make the difference. It’s the attention to detail that changes it from a toy to a scale model. It’s what makes our railroads look real. In today’s clinic we will talk about many different aspects of the hobby and how details can be applied to help make your railroad stand out from all the rest.



THE DETAILS MAKE THE DIFFERENCE

Today we will talk about:

**Philosophy
Cars
Locomotives
Structures
Scenes**



THE DETAILS MAKE THE DIFFERENCE

Philosophy

What to detail and what not to detail...

My philosophy on this is basic. If you can see it, detail it. If you can't then don't bother.

Foreground or contest models should be detailed and it's better if that is done inside and out. Those are models where you can lift off the roof or see in windows and doors. Background models can be detailed and need some attention but not to the same level.

We'll discuss philosophy off and on throughout this clinic.

Philosophy
Cars
Locomotives
Structures
Scenes



THE DETAILS MAKE THE DIFFERENCE

All Types

Brake Rigging

Philosophy

Cars

Locomotives

Structures

Scenes

Do you need brake rigging on all of your cars?

.: Contest - Yes

.: Operations - Maybe not



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

P&DR High Side Gondola 6151 - Duane Richardson



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

All Types

Roofs

What should we find on the roof of our cars?

- ..: Surface depends on the era, which road, and car type
- ..: Wooden roof walks 'sometimes' were not painted.
- ..: Steam era? Don't forget cinders on the roof

Philosophy
Cars
Locomotives
Structures
Scenes



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

All Types
Lettering

Fading lettering. Airbrush a very light mist over the car that is the same color as the background of the car. This will give the lettering a faded look.

Philosophy
Cars
Locomotives
Structures
Scenes



THE DETAILS MAKE THE DIFFERENCE

All Types
Lettering

P&DR High Side Gondola 6151 - Duane Richardson

Philosophy
Cars
Locomotives
Structures
Scenes



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

All Types

Graffiti

This will depend on the era and location of your railroad. Sadly, most cars have something on them these days.

Philosophy
Cars
Locomotives
Structures
Scenes



THE DETAILS MAKE THE DIFFERENCE

All Types

Graffiti

Philosophy
Cars
Locomotives
Structures
Scenes





THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Boxcars

Loads

Loads can be depicted either by an open door or by placard. 'Pinto Bean Loading Only'

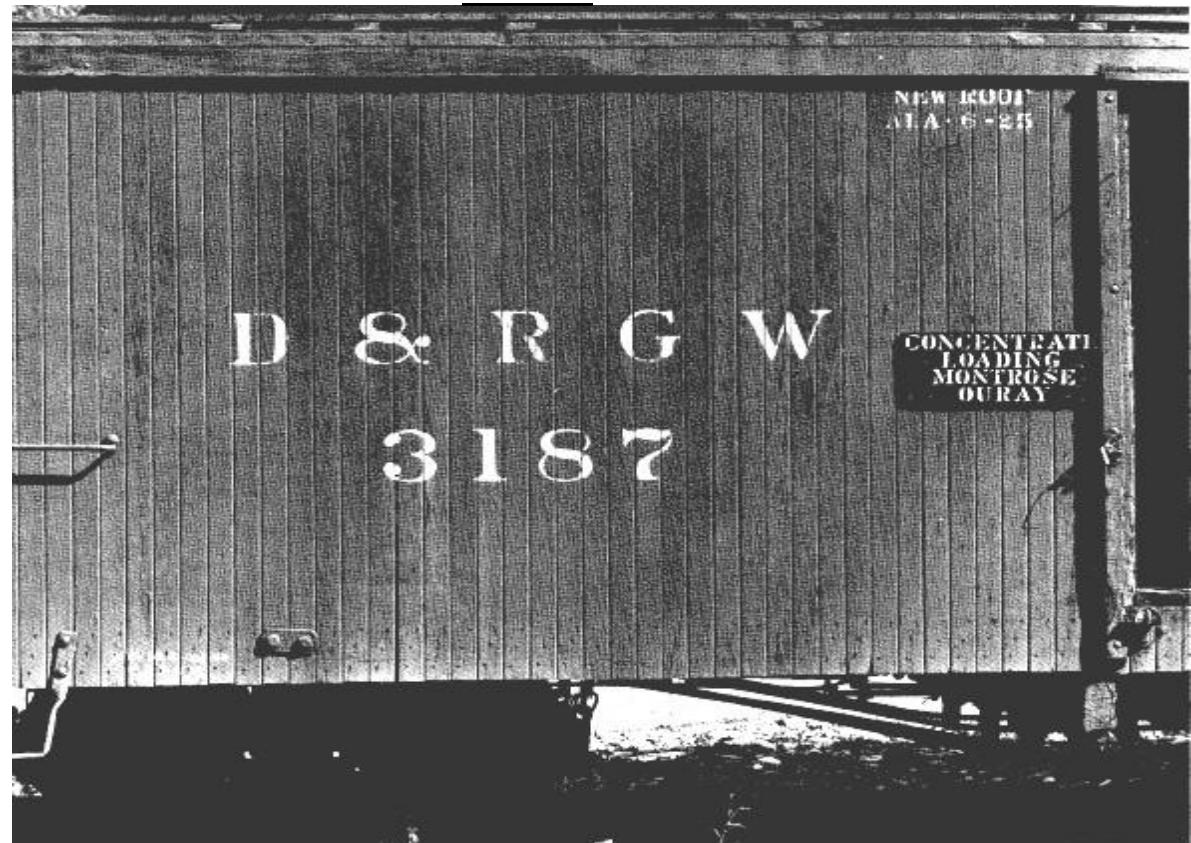


THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Boxcars

Loads



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Boxcars

Miscellaneous

Sometimes accidents happen. When they do, the railroad doesn't always have time to take a car out of revenue service for expensive repairs. Occasionally, you will see a quick patch applied and the car put back into service.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Boxcars

Miscellaneous



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

*Show the cars from H
Brunk*

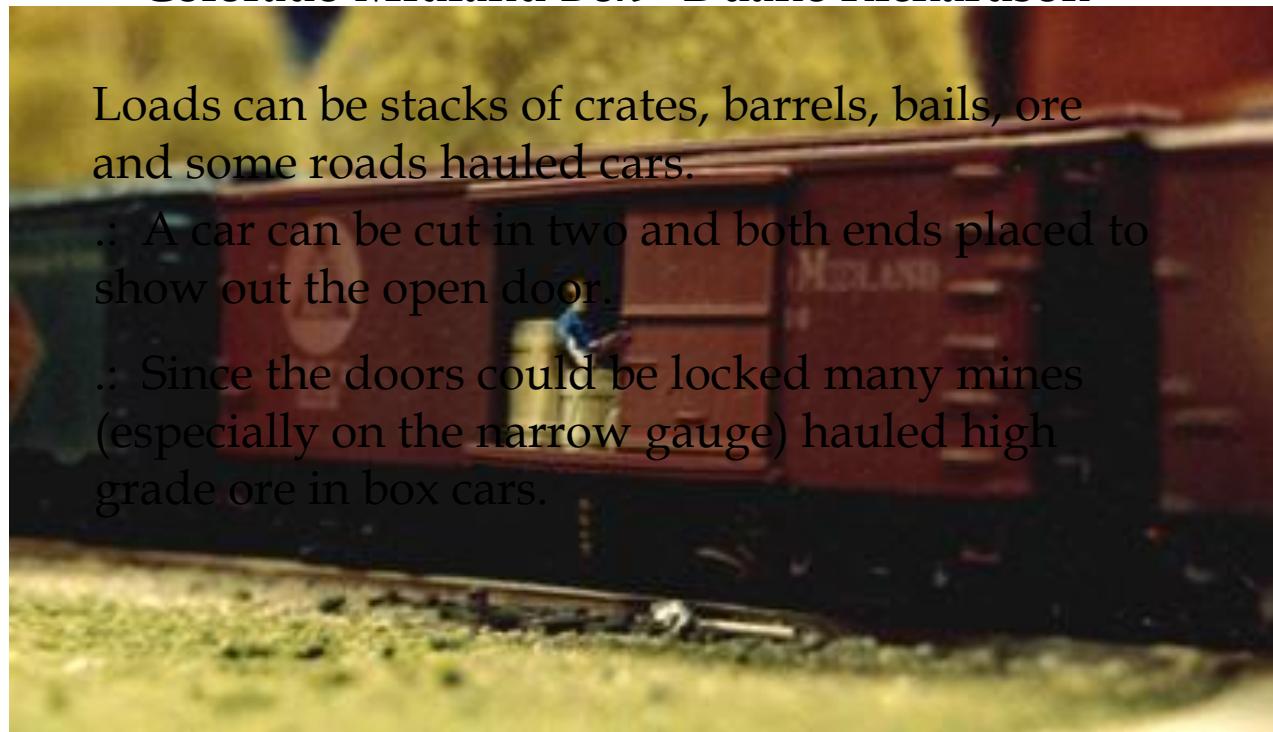
Boxcars

Colorado Midland Loads - Duane Richardson

Loads can be stacks of crates, barrels, bails, ore and some roads hauled cars.

∴ A car can be cut in two and both ends placed to show out the open door.

∴ Since the doors could be locked many mines (especially on the narrow gauge) hauled high grade ore in box cars.





THE DETAILS MAKE THE DIFFERENCE

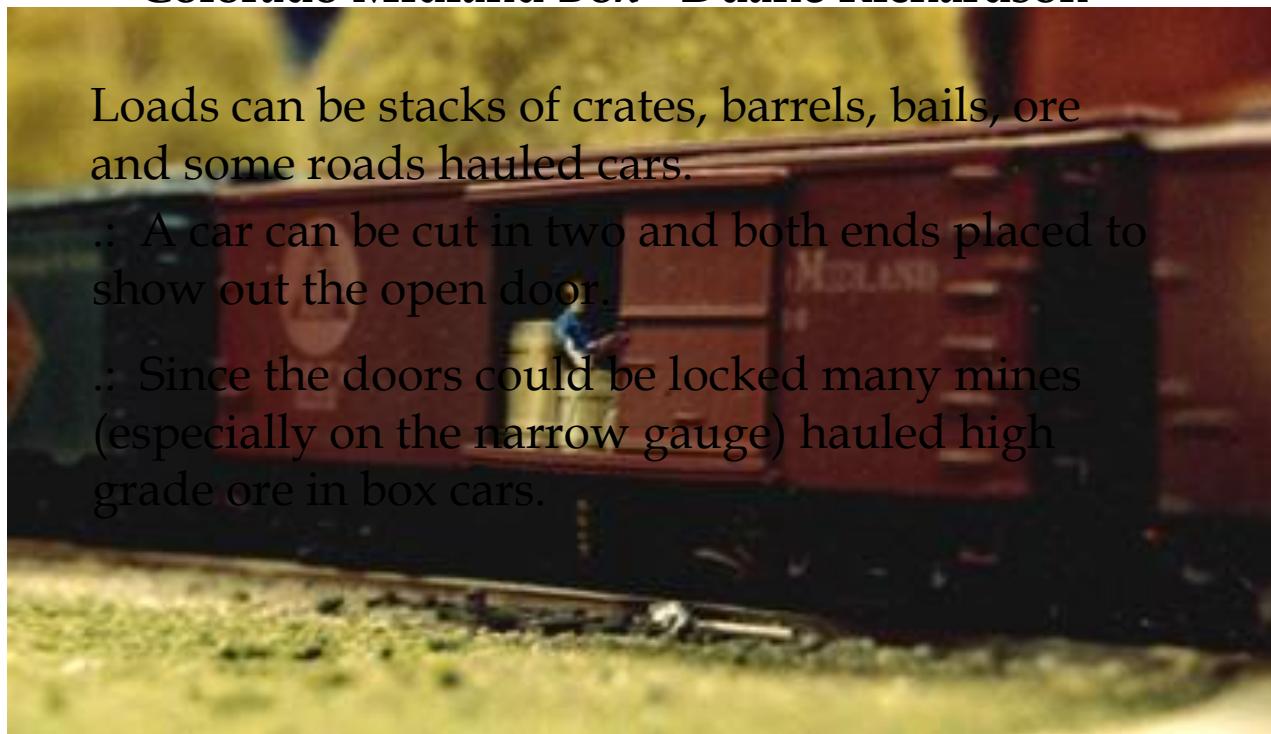
Boxcars

Colorado Midland Loads - Duane Richardson

Loads can be stacks of crates, barrels, bails, ore and some roads hauled cars.

∴ A car can be cut in two and both ends placed to show out the open door.

∴ Since the doors could be locked many mines (especially on the narrow gauge) hauled high grade ore in box cars.



Show the cars from H Brunk



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Reefers

Since I wasn't around during the days of the ice reefer I learned this little tidbit from our Jerry Schoenberg. When we see reefers running around on a layout we often see them with the hatches up. There was an insulating plug on the bottom of those doors that most modelers miss.



THE DETAILS MAKE THE DIFFERENCE

Reefers

Philosophy
Cars
Locomotives
Structures
Scenes





THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Reefers





THE DETAILS MAKE THE DIFFERENCE

Reefers



Philosophy
Cars
Locomotives
Structures
Scenes



THE DETAILS MAKE THE DIFFERENCE

Hoppers & Gondolas

The tops of the sides

Depending on the type of material being hauled the tops of the walls can take quite a beating

On the D&RGW NG the side stakes on the High Side gons would break when the car was put in the rotary dumper in Salida. This led to splices being added.

Hopper tops are covered in spills and such. Remember that some materials will hold water which will cause it to rust faster.

Philosophy
Cars
Locomotives
Structures
Scenes



THE DETAILS MAKE THE DIFFERENCE

Hoppers & Gondolas

The tops of the sides

Philosophy
Cars
Locomotives
Structures
Scenes





THE DETAILS MAKE THE DIFFERENCE

Hoppers & Gondolas

The tops of the sides



Philosophy
Cars
Locomotives
Structures
Scenes

<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Hoppers & Gondolas

The tops of the sides



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Hoppers & Gondolas

The tops of the sides

Philosophy
Cars
Locomotives
Structures
Scenes



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Stock Cars

What's going on in there?

Straw in the floor is a extra detail that's easy to add.

Lime stains. Cars were washed and the floor limed and fresh straw put down from time to time. Washing the car would cause the lime to run down the side of the car. This usually stains the sills with a white wash. It can also effect the sides of the car if it's a double decked car for sheep or hogs.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Stock Cars

What's going on in there?

Cripple Creek & Tin Cup - Marc LaChey



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Tank Cars Spills

They are hauling liquids. Whatever they are moving will leak and be spilled while loading and unloading.

Depending on what the car is hauling other details can be added. For example, if this is a water car for fire suppression you might include a hose of some sort wrapped around the top of the tank.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Tank Cars

Spills





THE DETAILS MAKE THE DIFFERENCE

Flat Cars

These cars would haul large materials that wouldn't normally fit into a box car. On most roads the decks were never painted and took a great deal of abuse.

Philosophy
Cars
Locomotives
Structures
Scenes



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Flat Cars





THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Cabooses

What could I possibly need on a caboose?

Depending on the era and road you model the caboose can change a lot. Take the roof for example...On the narrow gauge they used tar and a silver looking material similar to the stuff they use on mobile homes. Many used rolled roofing as well.

You can also add marker lamps that light up as a nice detail to the model. Include the crew in the cupola as well.



THE DETAILS MAKE THE DIFFERENCE

Cabooses

What could I possibly need on a caboose?



Philosophy
Cars
Locomotives
Structures
Scenes



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Cabooses

What could I possibly need on a caboose?



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Cabooses

What could I possibly need on a caboose?



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Passenger Cars

Where the railroad meets the public

So much depends on the road and era here. Most cars in passenger service were kept in pretty good shape since it was the part facing the public.

People in seats, bags can add a lot of detail.

If going to the contest the overhead storage is a good detail to add as are bathrooms and stoves if they were used for your line. Some had drinking water containers as well.



THE DETAILS MAKE THE DIFFERENCE

Passenger Cars

Where the railroad meets the public

Vista Verde - Paul Richardson

Philosophy
Cars
Locomotives
Structures
Scenes





THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Locomotives

Steam Locomotives

These are VERY dirty machines but there can be differences depending on what road you model, when and what kind of fuel us being used.

In the early days crews wiped down the engines after each run to clean them. Passenger trains were also kept cleaner than freight engines.

The type of fuel burned will effect the weathering of the engine and the cars behind. Oil burning locomotives won't leave cinders on car roofs for example.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Locomotives

Steam Locomotives - Details to look for

Steam and sand lines.

Coal burners will need a shovel for the fireman.

Water bags.

Soot will be everywhere! - depending on the fuel.

Oil burners will have the occasional spill from filling the tender.

Add a crew to the cab and maybe one shoveling from the tender.

Cab curtains



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Locomotives

Steam Locomotives - Details to look for

D&RGW K-36 # 484 - Steve Amitrano



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Locomotives

Steam Locomotives - Details to look for





THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Locomotives

Steam Locomotives - Details to look for

Calcium spots around leaky steam lines. This is easily done with water and white acrylic paint. Dip a paint brush in water and touch it to the model where you want the leak to start. Let the water run on its own with gravity.

Taking a dry brush dip it in the white acrylic paint and then touch that to the water. The paint will flash through the water and dry very thin and leave a calcium looking stain.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Locomotives

Steam Locomotives - Details to look for

Fading lettering. This happens a lot from water running down the side of the tender from rain or overfilling. White pastel dabbed on and dragged downward with the finger.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Locomotives

Diesel Locomotives

I'll be the first to admit that I don't know a thing about diesels. I will offer a few things that you might look to add to your next project...



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Locomotives

Diesel Locomotives

Speedometer cable from bottom of cab to the front truck - black thread.
Visors to the cab side windows.
Radio antenna's.
Soot around the exhaust.
Fans with blades.
MU hoses to the front and rear.
Cut levers to front and rear.
Class lighting to front.
A crew to the cab.
MARS lights.
Ditch lights.



THE DETAILS MAKE THE DIFFERENCE

Philosophy Cars Locomotives Structures Scenes

Structures

General Comments

Most layouts are displayed in such a way that we are looking down on most of the buildings. Because of this we spend more time looking at the roofs of buildings than anything else.

Chimneys and vent pipes. If a building has running water it will have vent pipes for the plumbing system. Phone junction boxes, roof access stairwells, wall ladder cages on newer buildings, TV antenna and or a Satellite Dish, tar lines for rolled roofing, roof vents, gutters, water tanks, birds, electrical boxes, signs, AC units and ducting, workmen, debris and leave some doors and windows open.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

General Comments

Blanchard Springs - Paul & Duane Richardson



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Roofing Materials

Rolled roofing
Asphalt shingles
Wooden shingles
Sheet metal - 3 foot widths.
Tar and gravel - Sand paper works well for this.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Roofing Materials





THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Roofing Materials



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls

Walls are made from a large variety of materials. Wood, Brick, Cement, Stucco and Sheet metal are only a few. Mother Nature effects them all differently as well.

Details can include signs, downspouts, doors, window (drapes, awnings, blinds), Truss rod supported roofs (like a loading doc roof) with decorative wall mounting plates, window AC units, window flower boxes, boarded up windows & doors, mortar on brick, fire escapes, security camera, lights, electric and gas meters...



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls - Brick

Brick walls were left natural and some were painted. Natural brick walls will oxidize over time leaving some bricks a little whiter in color than those around them.

Sometimes only part of a building will be taken down for some reason or another. This will leave what was once an internal wall as an external wall. Most internal walls were painted and by painting part of the side of a building and leaving the top the natural brick is a nice detail that often is over looked.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls - Brick

Use a wash to put the mortar in. This is easy to do and will really help make a building stand out. If it's a kit with really wide mortar lines you may have to do a light wash for the mortar and follow up with a spot wash of the brick color.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls - Brick

Blanchard Springs - Paul & Duane Richardson



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy Cars Locomotives Structures Scenes

Structures

Walls - Wood

There are many different types of wood siding: clapboard, board and batten and car siding (scribed siding) being the popular ones.

Wood will show more weathering effect than most. Split and lifting boards are good details and nail holes are popular.

Philosophy – Keep in mind the scale you are modeling. Rarely will you be able to see a nail in a wall at 87 feet. That means you shouldn't be able to see it from a foot in HO. I've seen some that you can see from across the room.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls - Wood



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy Cars Locomotives **Structures** Scenes

Structures

Walls - Sheet Metal

As mentioned before this is put up in various lengths but 3 foot widths.

Loose and curled up edges are a nice detail on a building that hasn't seen much maintenance.

You can also etch the metal with PC Board etching material. This can be found at Radio Shack among other places. You can also use Muriatic Acid to weather sheet metal - available at swimming pool supply stores and Wal-Mart in summer. This should only be done outdoors because of the smell and the mess. It's a acid so BE CAREFUL.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls - Sheet Metal

Place a piece of the metal into a container with the acid. The container will need to be plastic or glass. After the metal starts to react pull it out and then dunk it in a container with water and baking soda. This will neutralize the acid and halt the process. Lay them on a paper towel to dry. Once on the model seal with Dull coat to keep the pieces from oxidizing.

The reaction of the metal and the acid causes a lot of popping and splatters the acid. Work outside and cover your work surface with something that can be thrown away.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls - Stucco

Easy effect to do since you can trowel on a material over a blank wall. Vinyl spackle works well for stucco and can be applied with an artist's pallet knife

Doing this over brick scribed styrene makes a nice effect if you leave a spot of brick showing.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls - Stucco

Santa Fe - Steve Amitrano



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Structures

Walls - Stucco

Santa Fe - Steve Amitrano



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments

Think of what the scene is representing. Let's say that it is a some sort of manufacturing plant. What type of machinery might they use? Broken machine parts are often left laying around the building. What kind of products are they making? What materials will they need in the manufacturing process? Can any of these materials be spilled? If so, how would that stain the ground and effect the area? These materials will also need to be represented on loading docks or inside the building if you have open doors and interior lighting. Basically, look at what you are attempting to build. Look at pictures or go look at the real thing (if possible).



THE DETAILS MAKE THE DIFFERENCE

Philosophy Cars Locomotives Structures **Scenes**

Scenes

General Comments

Debris around the structure itself such as old equipment, trash, pallets, wooden chunks along the track where cars are spotted.

Add an interior to create a visual scene.

Lighting both inside and out can make a big difference. Using various voltages and bulbs you can vary the color and intensity of the lights. On most layouts all the lights are the same color and brightness.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments

Blanchard Springs - Paul & Duane Richardson



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy Cars Locomotives Structures Scenes

Scenes

General Comments

Put workmen on the loading docks. Perhaps a Policeman working a wreck or giving a ticket, a Postman delivering mail, a window washer cleaning store-front windows...a sniper on a water tower (I'll explain) A train derailment being cleaned up would make a good visual scene. A café or barbershop with customers inside perhaps.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments

Blanchard Springs - Paul & Duane Richardson



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments

Blanchard Springs - Paul & Duane Richardson



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy Cars Locomotives Structures Scenes

Scenes

General Comments

Weeds, Oil stains on the streets, brick showing through black top.

Gas stations can just have a car at the pump with all the doors closed or you can have people inside paying. You could have one of the bays open and a car up on the lift. You can have oil drums, tires and soda machines around the building. Inside the bay you could have a light flashing (a welder) and so it would appear that the muffler is being worked on.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments

Blanchard Springs - Paul & Duane Richardson



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments

Blanchard Springs - Paul & Duane Richardson



<http://www.purgatoryanddevilriver.com>



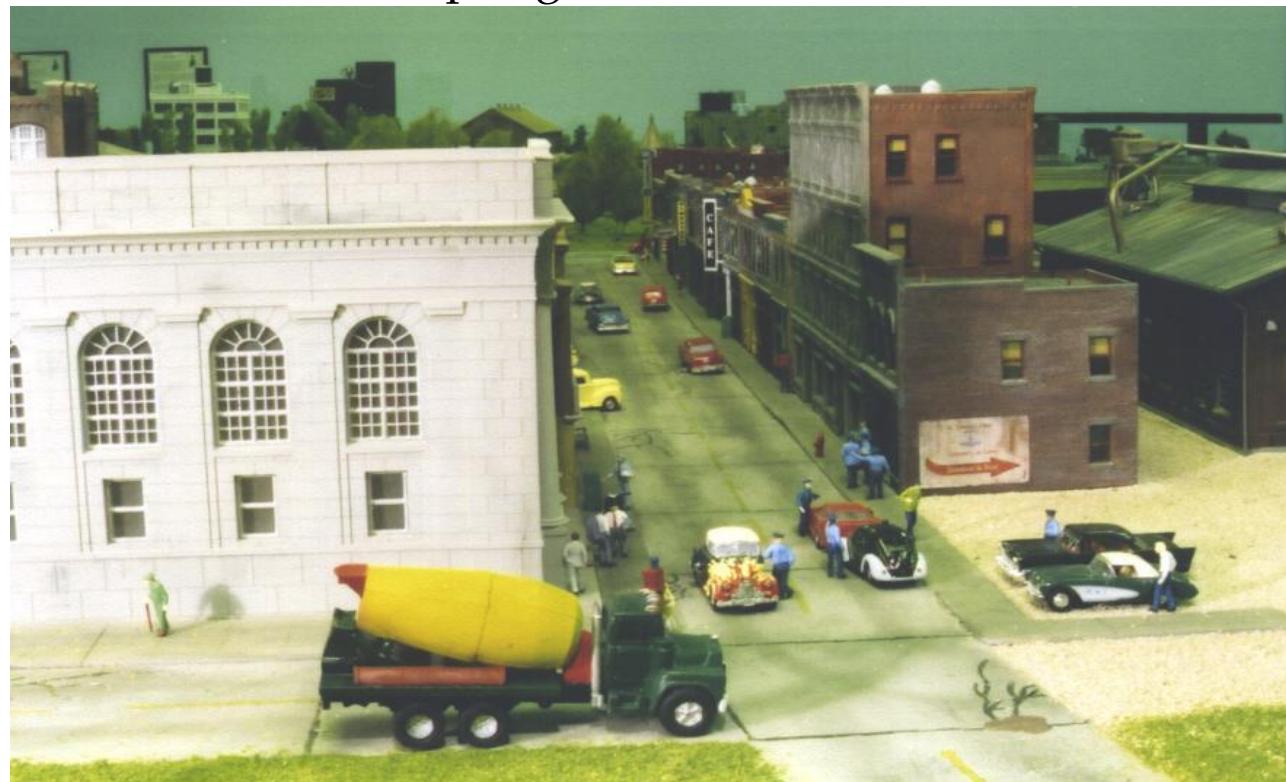
THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments

Blanchard Springs - Paul & Duane Richardson



<http://www.purgatoryanddevilriver.com>



THE DETAILS MAKE THE DIFFERENCE

Scenes

General Comments

Blanchard Springs - Paul & Duane Richardson

Philosophy
Cars
Locomotives
Structures
Scenes





THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments

Don't overdo it. It can be easy to do. Keep in mind how things work in real life. One common mistake some of us make is to have ton of junk laying around our train yards. While this was done from time to time on some roads it is a safety issue and you won't see piles of junk all over the place.



THE DETAILS MAKE THE DIFFERENCE

Philosophy
Cars
Locomotives
Structures
Scenes

Scenes

General Comments





THE DETAILS MAKE THE DIFFERENCE

Scenes

General Comments

Philosophy
Cars
Locomotives
Structures
Scenes





THE DETAILS MAKE THE DIFFERENCE

Junior's Salvage - Duane Richardson

Scenes

General Comments

Philosophy

Cars

Locomotives

Structures

Scenes





THE DETAILS MAKE THE DIFFERENCE

Scenes

General Comments

Blanchard Springs - Paul & Duane Richardson

Philosophy
Cars
Locomotives
Structures
Scenes





THE DETAILS MAKE THE DIFFERENCE

A little planning can go a long way. You don't have to have every last detail in place if you don't want to. Look at how it is done in real life and model what you feel is necessary to make the scene come to life in your mind. Common sense goes a long way.

Always remember...it's YOUR railroad. If somebody else doesn't like it...too bad.

Most importantly, we do this to have fun. Don't let it get to you.



THE DETAILS MAKE THE DIFFERENCE

Questions?



THE DETAILS MAKE THE DIFFERENCE

Thanks!